Innovation, Quality, Performance

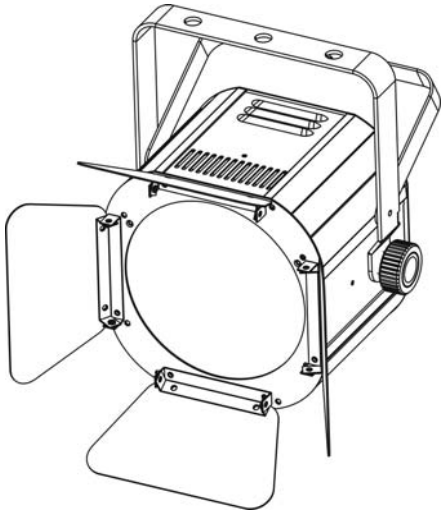
PRO COLOR PAR 21TC

DMX512

LINKABLE

STAND ALONE

Marvelous Sound Activation



CP-21TC

User Manual

Please read the instructions carefully before use

1-

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1. Safety Introductions

WARNING

Please read the instructions carefully which includes important information about the installation, operation and maintenance.

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- All fixtures are intact from the manufacturer, please operate follow up the user manual, artificial fault are not under guarantee repair.
- Unpack and check carefully that there is no transportation damage before using the unit.
- The unit is for indoor use only. Use only in a dry location.
- Do install and operate by operator.
- Use safety chain when fixes the unit. Don't handle the unit by taking its head only, but always by taking its base.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked, otherwise the unit will be overheated.
- Before operating, ensure that the voltage and frequency of power supply match the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Maximum ambient temperature TA：40℃. Don't operate it where the temperature is higher than this.
- Don't connect the device to any dimmer pack.
- First run, there will be smoke or smells, and all disappearing a few minutes later.
- Make sure there are no flammable materials close to the unit while operating, as it is fire hazard.
- Look over power wires carefully, replace immediately if there is any damage.
- Never run on for a long time lest shortening lifespan.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happen, cut off the mains power immediately.
- Do not operate in dirty and dusty environment, also cleaning fixtures regularly.

EC - Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55014-2: 1997 A1: 2001, EN61000-4-2: 1995; EN61000-4-3: 2002; EN61000-4-4: 1995; EN61000-4-5: 1995, EN61000-4-6: 1996, EN61000-4-11: 1994.

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Harmonized Standard

EN60598-1: 2000+ALL: 2000+A12: 2002

Safety of household and similar electrical appliances

Part 1: General requirements

A. The fixture does not work, no light

1. Check the connection of power and main fuse.
2. Measure the mains voltage on the main connector.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if link properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the fixture or the previous one.
4. Try to use another DMX controller.
5. Check if the DMX cables run near or run alongside to high voltage cables that may cause damage or interference to DMX interface circuit.

C. Some fixtures don't respond to the easy controller

1. You may have a break in the DMX cabling. Check the LED for the response of the master/ slave mode signal.
2. Wrong DMX address in the fixture. Set the proper address.

D. No response to the sound

1. Make sure the fixture does not receive DMX signal.
2. Check microphone to see if it is good by tapping the microphone.

E. One of the channels is not working well

1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

8. Fixture Cleaning

The cleaning of internal must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the fixture's optics.

- Clean with soft cloth using normal glass cleaning fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

- Do not allow children to operate the fixture.
- Do not touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires together arounding other cables.
- Disconnect mains power before fuse/lamp replacement or servicing.
- Replace fuse only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- Do not open the unit as there are no user serviceable parts inside.
- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center.
- Disconnect the mains power if the fixture is not used for a long time.
- Do use original packing materials once transport it again.
- Do not look directly at the LED light beam while the fixture is on.

For power supply, do not connect in series much more than 7 units, use another mains supply for next 7 units.

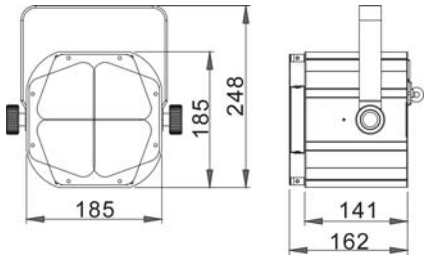
Installation

The unit should be mounted via its screw holes on the bracket. Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. Always ensure that the structure to which you are attaching the unit is secure and is able to support a weight of 10 times of the unit's weight. Also always use a safety cable that can hold 12 times of the weight of the unit when installing the fixture.

The equipment must be fixed by professionals. And it must be fixed at a place where is out of the touch of people and has no one pass by or under it.

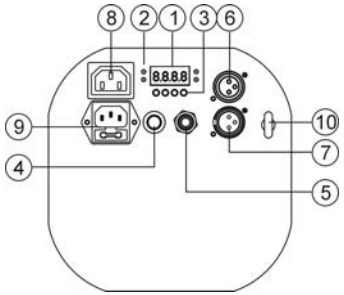
2. Technical Specifications

- **Voltage**：100-240V~ 50/60Hz
- **LED:** 3W Tri-Color x 21pcs
- **Fuse:** T 6.3A
- **Power consumption**：85W
- **Dimension**： 162 x 185 x 248mm
- **Weight**： 4.1kgs



3. How To Set The Fixture

3.1 Control Panel



① **Display:** To show the various menus and the selected functions

② **LED:**

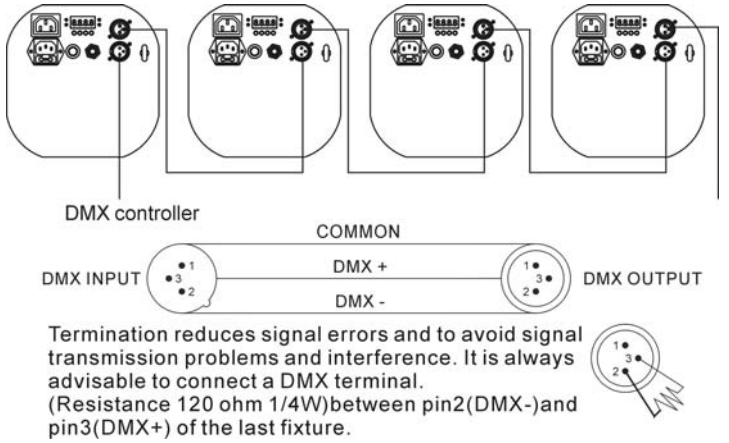
DMX	On	DMX input present
MASTER	On	Master Mode
SLAVE	On	Slave Mode
SOUND	Flashing	Sound activation

③ **Button:**

MENU	To select the programming functions
DOWN	To go backward in the selected functions
UP	To go forward in the selected functions
ENTER	To confirm the selected functions

6. DMX512 Connections

The DMX512 is widely used in intelligent lighting control, with a maximum of 512 channels.

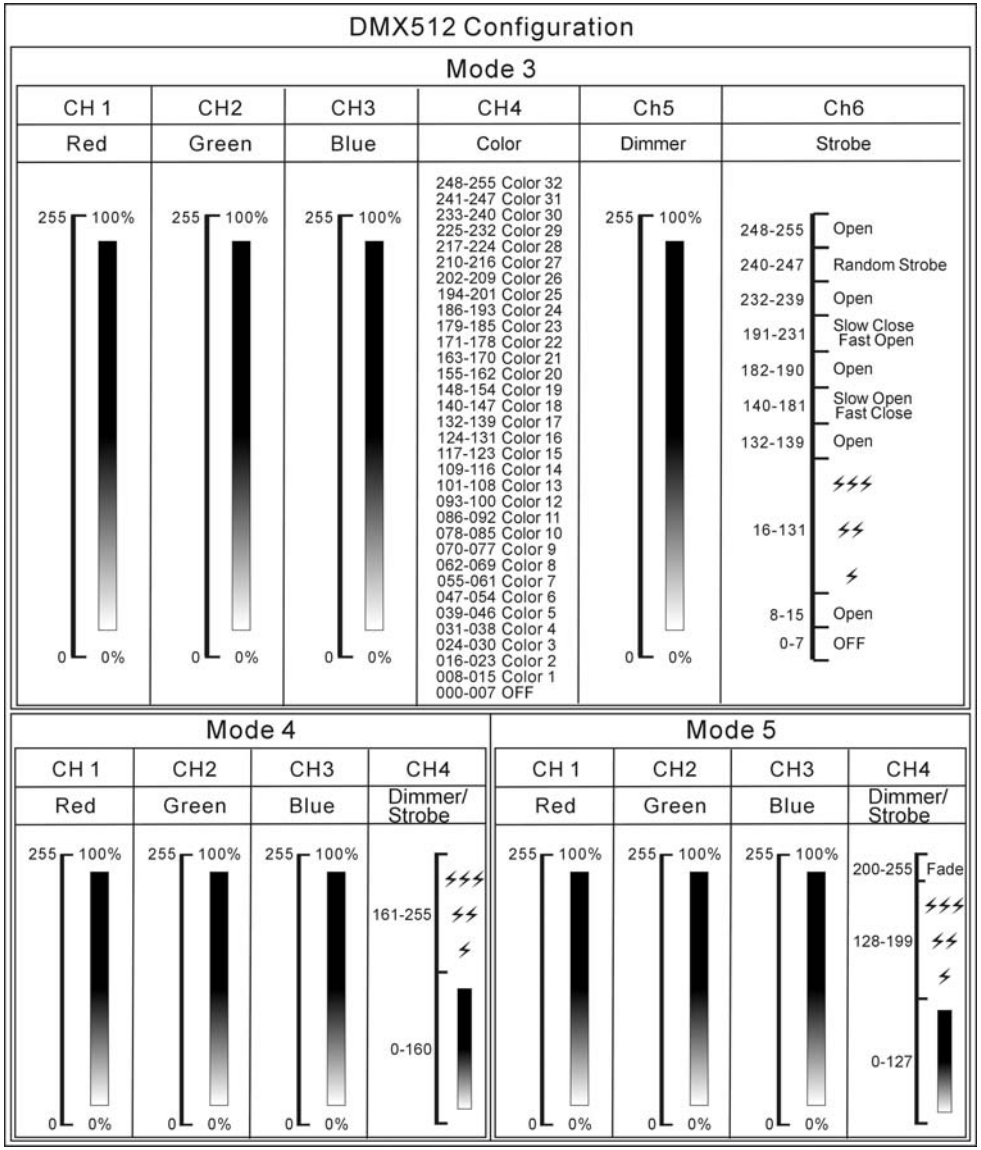

DMX controller
COMMON
DMX INPUT
DMX +
DMX -
DMX OUTPUT
Termination reduces signal errors and to avoid signal transmission problems and interference. It is always advisable to connect a DMX terminal.
(Resistance 120 ohm 1/4W)between pin2(DMX-)and pin3(DMX+) of the last fixture.

1. Connect the fixture together in a “daisy chain” by XLR plug cable from the output of the fixture to the input of the next fixture. The cable cannot be branched or split to a “Y” cable. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system
2. The DMX output and input connectors are pass-through to maintain the DMX circuit when one of the units’ power is disconnected.
3. At last fixture, the DMX cable has to be terminated with a terminator to reduce signal errors. Solder a 120-ohm 1/4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.
4. Each lighting fixture needs to have an address set to receive the data sent by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
5. 3 pin XLR connectors are more popular than 5 pins XLR.
   3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)
   5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+),
   Pin4/5: not used

7. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

Mode 3&4&5:



④ **Microphone:** Receive music for the sound active.

⑤ **Only for remote control:** By connect to the 1/4'' microphone jack to control the unit for Stand by, Function and Mode function.

⑥ **DMX output:** For DMX512 link, use 3-pin XLR plug cable to link the next unit.

⑦ **DMX input:** For DMX512 link, use 3/5-pin XLR plug cable to input DMX signal

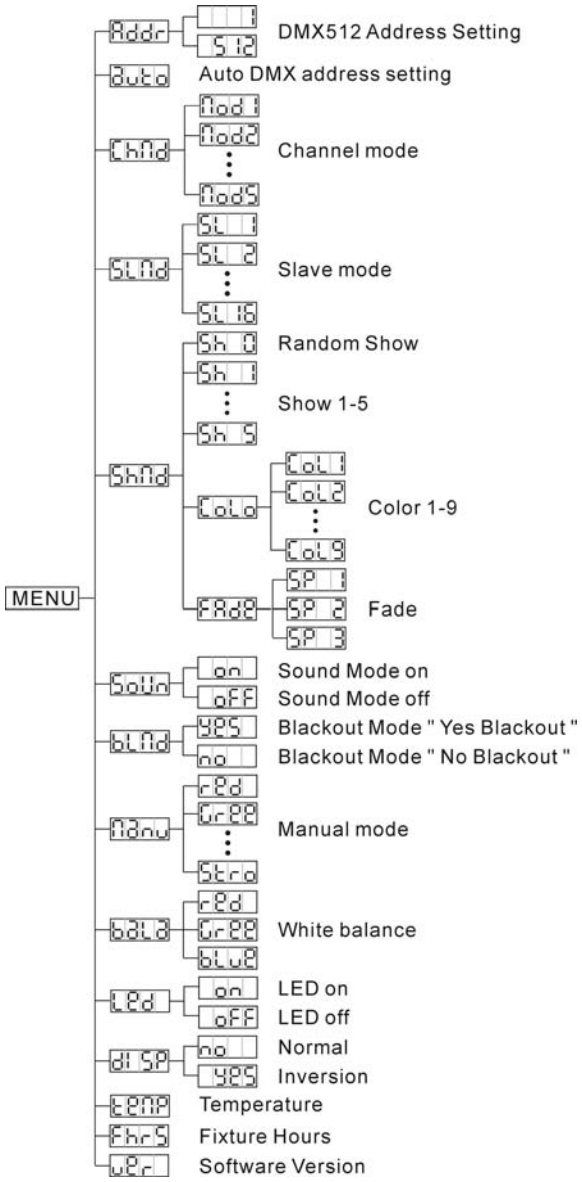
⑧ **Mains output:** Connect to supply mains power for the next unit.

⑨ **Mains input:** Connect to mains AC.

⑩ **Safety Ring**: Keep the installation safe.

3.2 Main Function

To select any functions, press **MENU** button until the required one is shown on the display. Select the function by **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the mode. Once the required mode has been selected, press **ENTER** button to setup or it will automatically return to the main functions without any change after idling one minute. Back to the functions without any change press **MENU** button. The main functions are shown below:



Addr DMX 512 Address Setting

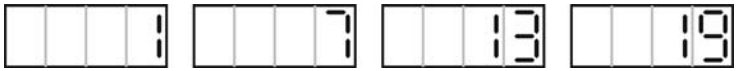
Press the **MENU** button up to when the Addr is shown on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the DMX 512 address.

the display stops blinking or storing automatically one minute later. To go back to the functions without any change press the **MENU** button again. If you use please refer to the following diagram to address your DMX512 channel for the first 4 units.

3 channels：

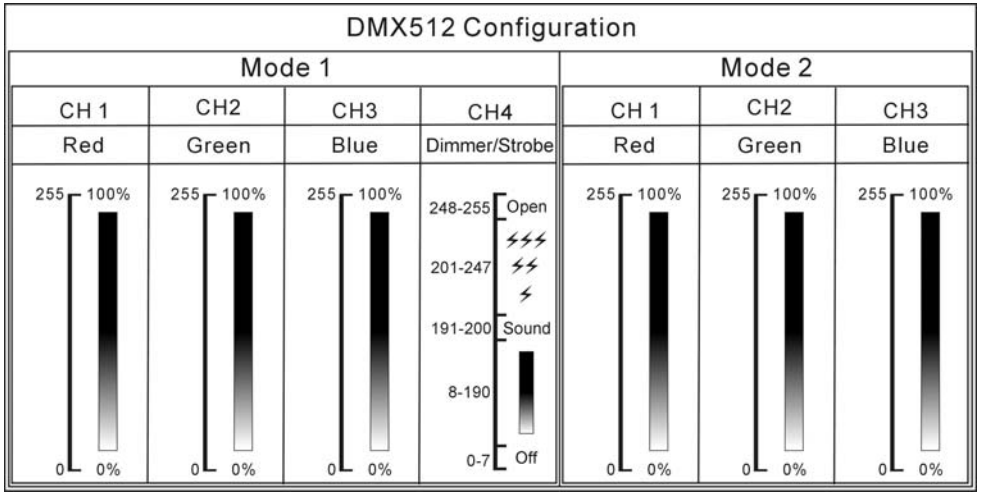
4 channels:

6 channels**:**



5. DMX512 Configuration

Mode 1&2；



4.1 Master/Slave Built In Preprogrammed Function

The fixture will allow you to link 16 fixtures together and operate without a controller. In Master/Slave mode, the first fixture whose DMX input jack has with nothing connect will be master automatically, set other units to slave 1 or slave2 or ⋯ slave 16 via menu, then the first unit will control the others to give an automatic, sound activated, synchronized light show. This function is good when you want an instant show. Any fixture can act as a Master or as a Slave

16-light show

In slave mode, slave 1 means the unit works as master, slave 2 means 2-light show, slave 3 means 3-light show and so on, In order to create a great light show, you can set the second unit to slave 2 to get contrast movement to each other, even if you have two units only.

4.2. Easy Controller (by CA-8)

The easy remote control is used only in master/slave mode. By connecting to the 1/4" microphone jack of the first unit, you will find that the remote controller on the first unit will control all the other units for Stand by, Function and Mode selection

Blackout	Blackout the unit			
Function	1. Strobe in white 2. Strobe in color 3. Sound Strobe	Select color 1-9	Select show 1-5	Fade Speed 1. Slow 2. Middle 3. Fast
Mode	Sound/Strobe (LED OFF)	Chase (LED ON)	LED slow blinking	LED fast blinking

4.3 DMX Controller

Use universal DMX controller to control the units, you have to set DMX address from 1 to 512 channel so that the units can receive DMX signal.

Press the **MENU** button up to when the Addr is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to change the DMX512 address. Once the address has been selected, press and keep **ENTER** button pressed up to when

Once the address has been selected, press **ENTER** button to setup or automatically exit menu mode without any change after one minute. Back to the previous functions without any change press **MENU** button.

Auto Auto DMX address setting

Press the **MENU** button up to when the Auto is blinking on the display. Pressing **ENTER** button and the DMX address of the fixture can be set automatically by built-in program. To go back to the functions press the **MENU** button again.

ChNd Channel Mode

Press the **MENU** button up to when the ChNd is shown on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the Mod1 (4 channels mode) or Mod2 (3 channels mode) or Mod3 (6 channels mode) or Mod4 (4 channels mode) or Mod5 (4 channels mode) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the functions without any change press the **MENU** button.

SLNd Slave Mode

Press the **MENU** button up to when the SLNd is showing on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select the SL 1 (normal) or SL 2 (slave 2) or ⋯ or SL 16 (16 light show) mode. Once the mode has been selected, press the **ENTER** button to setup or automatically return to the main functions without any change after one minute. To go back to the functions without any change press the **MENU** button again.

ShNd Show Mode

Press the **MENU** button up to when the ShNd is shown on the display. Pressing **ENTER** button, Use **DOWN** and **UP** button to select the Sh 0 (Random show) or Sh 1 (show 1) or Sh 2 (Show 2) or … or Sh 5 (show 5) or Colo (color) or FAdE (fade), if you select the color or fade mode, press **ENTER** button to confirm, and use **DOWN** and **UP** button to select color 1-9 or fade speed (speed 1: slow, speed 2: middle, speed 3: fast). Once select, press **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the last function without any change press the **MENU** button.

SoUn Sound

Press the **MENU** button up to when the SoUn is shown on the display. Pressing **ENTER** button, Use **DOWN** and **UP** button to select the on (sound on) or oFF (sound off). Once select, press **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the functions without any change press the **MENU** button

bLnd Blackout mode

Press the **MENU** button up to when the bLnd is shown on the display. Pressing **ENTER** button, Use **DOWN** and **UP** button to select the yES (blackout) or no (normal). Once select, press **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the functions without any change press the **MENU** button

Manu Manual setting color

Press the **MENU** button up to when the Manu is shown on the display. Pressing **ENTER** button, and use **DOWN** and **UP** button to select red, GrEE or ··· or Strb (strobe), press **ENTER** button to confirm and use **DOWN** and **UP** button to adjust the value, once select press **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the last function without any change press the **MENU** button.

bALA White Balance

Press the **MENU** button up to when the bALA is shown on the display. Pressing **ENTER** button, and use **DOWN** and **UP** button to select red, GrEE or bLuE, press **ENTER** button to confirm and use **DOWN** and **UP** button to adjust the value between 125 and 255, once select press **ENTER** button to setup or automatically exit menu mode without any change after one minute. To go back to the last function without any change press the **MENU** button.

LEd LED display

Press the **MENU** button up to when the LEd is shown on the display. Pressing **ENTER** button and the display will blink. Use **DOWN** and **UP** button to select on (display

always on) or oFF(display off 20 seconds after exit menu) mode. Once select, press **ENTER** button to setup or exit menu mode without any change after one minute. Back to the functions without any change press **MENU** button again.

diSP Display Inverse

Press **MENU** button until diSP is blinking on the display. Use **DOWN** and **UP** button to select no (display normal) or yES (display inverse), press **ENTER** button to setup. Back to the functions without any change press **MENU** button.

tEMP Temperature Test

Press the **MENU** button up to when the tEMP is blinking on the display. Pressing **ENTER** button and the display will show the temperature of the unit. To go back to the functions press the **MENU** button again.

FHrS Fixture Hours

Press the **MENU** button up to when the FHrS is blinking on the display. Pressing **ENTER** button and the display will show the number of working hours of the unit. To go back to the functions press the **MENU** button.

uEr Software version

Press the **MENU** button up to when the uEr is blinking on the display. Pressing **ENTER** button and the display will show the version of software of the unit. To go back to the functions press the **MENU** button again.

4. How To Control The Unit

You can operate the unit in three ways:

1. By master/slave built-in preprogram function
2. By easy controller
3. By DMX controller

No need to turn the unit off when you change the DMX address, as new DMX address setting will be effected at once. Every time you turn the unit on, it will show “CP21” on the display and move all the motors to their ‘home’ position. After that the unit will be ready to receive DMX signal or run the built in programs.